

**REMARKS**

**INTRODUCTION:**

In accordance with the foregoing, the claims have been retained in their present form. No new matter is being presented, and approval and entry are respectfully requested.

Claims 1-5 are pending and under consideration. Reconsideration is respectfully requested.

**ENTRY OF RESPONSE UNDER 37 C.F.R. §1.116:**

Applicants request entry of this Rule 116 Response and Request for Reconsideration because:

the explanations herein clarify differences of the claims of the present invention from the cited references and why the claims of the present application should be allowed.

The Manual of Patent Examining Procedures sets forth in §714.12 that "[a]ny amendment that would place the case either in condition for allowance or in better form for appeal may be entered." ( Underlining added for emphasis) Moreover, §714.13 sets forth that "[t]he Proposed Amendment should be given sufficient consideration to determine whether the claims are in condition for allowance and/or whether the issues on appeal are simplified." The Manual of Patent Examining Procedures further articulates that the reason for any non-entry should be explained expressly in the Advisory Action.

**REJECTION UNDER 35 U.S.C. §103:**

A. In the Office Action, at pages 2-3, numbered paragraph 3, claims 1-3 and 5 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ushio et al. (USPN 4,963,974; hereafter, Ushio) in view of Baker (USPN 3,917,885; hereafter, Baker) and Nakazawa et al. (USPN 4,717,459; hereafter, Nakazawa). The reasons for the rejection are set forth in the Office Action and therefore not repeated. The rejection is traversed and reconsideration is requested.

It is respectfully submitted that it is known to those skilled in the art that different chemicals react differently. The present invention utilizes a non-cyanogen type electrolytic solution for plating gold. As pointed out in the background of the present application (see page 1, lines 27-34), cyanogen ions corrode the resist to separate the latter from the surface of the circuit board, causing a gap between the circuit board and the resist to form a gold film on a part

of the circuit board which is not to be plated with gold. Hence, the present invention prevents this problem by utilizing a non-cyanogen type electrolytic solution. In addition, as noted on page 12, lines 23-25, the non-cyanogen-type gold-plating electrolytic solution of the present invention is low in toxicity and excellent in handling ease.

On page 2, paragraph 3 of the Office Action, the Examiner admits: "Ushio et al. fail to teach utilizing a combination of monopotassium citrate and tri-potassium citrate as the pH adjuster."

It is respectfully submitted that Baker teaches the use of cyanide in the plating bath, for example, as recited in claim 1 of Baker, recited below for the Examiner's convenience:

1. An electroless plating bath for autocatalytic deposition of Group IB metals upon a substrate comprising an aqueous solution of an imide complex of the Group IB metal to be plated, said imide complex of the Group IB metal to be plated including an imide selected from the group consisting of imides having the formula  $RNHCO$ , and cyclic imides having the formula  $RCONHCO$ , wherein R is selected from the group consisting of alkylene, substituted alkylene, arylene, and substituted arylene, an alkali metal cyanide in an amount ranging from about 2 to 20 grams per liter, sufficient to stabilize said bath, and a reducing agent selected from the group consisting of water soluble alkali metal borohydrides, water soluble amine boranes and formaldehyde, said bath maintained at a pH of from about 11 to 14. (emphasis added)

Hence, Baker teaches away from a non-cyanogen type electrolytic solution for plating gold. It is respectfully submitted that cyano-type solutions are so different from non-cyanogen type solutions that one of ordinary skill in the art would not have applied the teachings of one to the other. Thus, it is respectfully submitted that there is no teaching or suggestion of combining Baker with Ushio.

The Examiner points out Example 8 of Nakazawa, submitting that Example 8 shows that it was known to utilize a combination of tripotassium citrate and monopotassium citrate as a buffering solution. However, Example 8 does not include tripotassium citrate and monopotassium citrate. However, this is believed to be a typographical error since Example 9 of Nakazawa contains tripotassium citrate and monopotassium citrate. Hence, applicants respond with respect to Example 9 of Nakazawa. Example 9 includes gold potassium cyanide. Hence, Nakazawa teaches away from a non-cyanogen type electrolytic solution for plating gold. Thus, it is respectfully submitted that there is no teaching or suggestion of combining Nakazawa with Ushio.

Hence, it is respectfully submitted that Ushio, Baker, and Nakazawa, alone or in combination, do not teach or suggest independent claim 1 of the present invention. Thus, independent claim 1 of the present invention is submitted to be patentable under 35 U.S.C. §103(a) over Ushio et al. (USPN 4,963,974) in view of Baker (USPN 3,917,885) and

Nakazawa et al. (USPN 4,717,459). Since claims 2-5 depend, directly or indirectly, from independent claim 1, claims 2-5 are submitted to be patentable under 35 U.S.C. §103(a) over Ushio et al. (USPN 4,963,974) in view of Baker (USPN 3,917,885) and Nakazawa et al. (USPN 4,717,459) for at least the reasons that independent claim 1 is patentable under 35 U.S.C. §103(a) over Ushio et al. (USPN 4,963,974) in view of Baker (USPN 3,917,885) and Nakazawa et al. (USPN 4,717,459).

B. In the Office Action, at page 3, numbered paragraph 4, claim 4 was rejected under 35 U.S.C. §103(a) as being unpatentable over Ushio et al. (USPN 4,963,974; hereafter, Ushio) in view of Baker (USPN 43,917,885; hereafter, Baker) and Nakazawa et al. (USPN 4,717,459; hereafter, Nakazawa) as applied above to claim 1 and further in view of Schmid et al. (hereafter, Schmid). The reasons for the rejection are set forth in the Office Action and therefore not repeated. The rejection is traversed and reconsideration is requested.

As noted above, since both Baker and Nakazawa teach using a cyanide-containing plating solution. Hence, both Baker and Nakazawa teach away from using a non-cyanogen type electrolytic solution for plating gold, as is disclosed by independent claim 1 of the present invention. Hence, neither Baker nor Nakazawa teaches or suggests a non-cyanogen type electrolytic solution for plating gold, as is disclosed in independent claim 1 of the present invention.

On page 2, paragraph 3 of the Office Action, the Examiner admits that "Ushio et al. fail to teach utilizing a combination of monopotassium citrate and tri-potassium citrate as the pH adjuster." Neither Baker nor Nakazawa teaches using a combination of monopotassium citrate and tri-potassium citrate as the pH adjuster in a non-cyanogen type electrolytic solution for plating gold. It is respectfully submitted that Schmid does not teach or suggest utilizing a combination of monopotassium citrate and tri-potassium citrate as the pH adjuster for a non-cyanogen type electrolytic solution for plating gold, as is disclosed in independent claim 1 of the present invention.

Hence, it is respectfully submitted that independent claim 1 of the present invention is patentable under 35 U.S.C. §103(a) over Ushio et al. (USPN 4,963,974) in view of Baker (USPN 43,917,885) and Nakazawa et al. (USPN 4,717,459) as applied above to claim 1 and further in view of Schmid et al. ("Metal Clusters and Colloids," Advanced Materials, Vol. 10, No. 7, 1998 (no month), pp. 515-523), alone or in combination. Since claim 4 depends from claim 1 of the present invention, claim 4 is submitted to be patentable under 35 U.S.C. §103(a) over Ushio et al. (USPN 4,963,974) in view of Baker (USPN 43,917,885) and Nakazawa et al. (USPN 4,717,459) as applied above to claim 1 and further in view of Schmid et al. ("Metal Clusters and Colloids," Advanced Materials, Vol. 10, No. 7, 1998 (no month), pp. 515-523), alone or in

combination, for at least the reasons that independent claim 1 is patentable under 35 U.S.C. §103(a) over Ushio et al. (USPN 4,963,974) in view of Baker (USPN 43,917,885) and Nakazawa et al. (USPN 4,717,459) as applied above to claim 1 and further in view of Schmid et al. ("Metal Clusters and Colloids," Advanced Materials, Vol. 10, No. 7, 1998 (no month), pp. 515-523), alone or in combination.

**EXAMINER'S RESPONSE TO ARGUMENTS:**

In the Office Action, at page 4, numbered paragraphs 5-6, the Examiner presented arguments with respect to Applicants' response filed September 11, 2006.

It should be noted that Examples 1-9 on pages 5-12 all utilize a combination of monopotassium citrate and tri-potassium citrate as the pH adjuster. Hence, it is respectfully submitted that the combination of monopotassium citrate and tri-potassium citrate as the pH adjuster is effective in the present invention (see, for example, Table 2 on page 12 of the specification).

**CONCLUSION:**

In accordance with the foregoing, it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot, and further, that all pending claims patentably distinguish over the prior art. Thus, there being no further outstanding objections or rejections, the application is submitted as being in condition for allowance which action is earnestly solicited. At a minimum, this Amendment should be entered at least for purposes of Appeal as it either clarifies and/or narrows the issues for consideration by the Board.

If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited and possibly concluded by the Examiner contacting the undersigned attorney for a telephone interview to discuss any such remaining issues.

If there are any underpayments or overpayments of fees associated with the filing of this Amendment, please charge and/or credit the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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